**Before the**

**FEDERAL COMMUNICATIONS COMMISSION**
**Washington, D.C. 20554**

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| In the Matter of | ) | |
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| Spectrum Policy Task Force Seeks Comment | ) | ET Docket No. 02-135 |
| On Issues Related to Commission's | ) | |
| Spectrum Policies | ) | |
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# COMMENTS OF THE CELLULAR TELECOMMUNICATIONS & INTERNET ASSOCIATION


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## SUMMARY

CTIA strongly believes that the FCC must reform its existing spectrum policies. The wireless industry needs a known, predictable path to more spectrum over the next decade and beyond. Unfortunately, current spectrum allocation decisions are political, reactive, and unpredictable. The process of trying to find additional harmonized spectrum that could be reallocated for advanced wireless services has highlighted just how difficult it is to envision a "predictable path" under the current U.S. spectrum allocation process.

A key reform should be the initiation of a more systematic longer-term spectrum planning process, potentially involving two separate "rolling" plans: a 3-year and a 10-year plan. The goal of such a process would not be to specify how the reallocated spectrum should be used, but rather to identify what spectrum could be made available for uses other than the status quo in the future. Additionally, to help facilitate politically difficult reallocation decisions, the Commission should consider the creation of an "independent review" mechanism that would utilize academic and other expert participants to identify Government or commercial spectrum that is being underutilized, or services whose needs could be met in other bands.

Reforming the spectrum allocation process is the most difficult challenge facing the Commission, but it is also the most important. The FCC and NTIA have an obligation to identify spectrum bands that are being underutilized, and to examine whether those bands should be reallocated. When faced with spectrum being used inefficiently, the Commission should not resort to the "easy fix" of giving non-viable incumbents flexibility to provide any service. A grant of broad additional service rule flexibility to incumbent licensees can result in perpetuating inefficient allocation and assignment schemes – instead of fixing them – causing troubling

equity, spectrum efficiency, and interference concerns. The Commission should instead consider whether a request for flexibility suggests that the affected band is a candidate for reallocation.

The Commission's spectrum auction assignment policies have generally worked well, and are not in need of major reform. The Commission should, however, immediately implement the trust fund mechanism for relocating Government users if given authority to do so by Congress. Additionally, the current satellite licensing mechanism is in need of reform. The Commission should adopt measures to discourage speculative applications, and should insist on more aggressive milestones that must be vigorously enforced.

As part of any spectrum management review, it is essential that the Commission develop a coherent policy regarding protection from interference. Interference concerns will continue to increase as spectrum bands become more congested. One approach would be to adopt a zoning-like model for determining what is, and is not, acceptable interference. Going forward, for new spectrum being made available (typically through auction), the FCC should more precisely define the "zoning" rights and obligations of licensees before licensing. For spectrum that has already been licensed, the FCC should ensure that incumbents have the exclusive right to provide service in their licensed spectrum, subject to "zoning" service rules. Those identified rights should not be undermined after licensing.

As the Commission investigates the concept of efficient use of spectrum, it should recognize that services with market incentives, such as the CMRS industry, already have every incentive to maximize spectral efficiency. The real spectral efficiency concerns are with services that are not subject to market discipline, including Public Safety users, satellite services, broadcasters, and USG users. The Commission should create incentives for those sectors to utilize their spectrum assignments more efficiently.

Regarding Public Safety, the Commission must work to ensure that any wireless communications equipment that is purchased for first responders should be 21st Century, state-of-the-art equipment that is interoperable, mobile, secure, and spectrum-efficient. Any upgrade of Public Safety networks should also involve moving most Public Safety operations to the 700 MHz band.

Finally, any effort by the Commission to address reform of the spectrum allocation and assignment process in the United States must be accompanied by a concomitant effort to improve U.S. participation in the international spectrum process.

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# COMMENTS OF THE CELLULAR TELECOMMUNICATIONS & INTERNET ASSOCIATION

The Cellular Telecommunications & Internet Association ("CTIA")[1] hereby submits its Comments in response to the *Public Notice* ("*Notice*") seeking comment on issues related to the Commission's spectrum policies.[2] In particular, the Commission seeks comment on a list of twenty-eight questions posed by the Spectrum Task Force as part of the Task Force's "systematic evaluation of existing spectrum policies."[3]

CTIA strongly believes that the FCC must reform its existing spectrum policies. The questions posed by the Commission's Spectrum Task Force are a positive step toward beginning the process of reform. Reform is of paramount importance to the commercial wireless industry because it is clear CMRS carriers will require additional spectrum to serve their customers'

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[1] CTIA is the international organization of the wireless communications industry for both wireless carriers and manufacturers. Membership in the association covers all Commercial Mobile Radio Service ("CMRS") providers and manufacturers, including cellular, broadband PCS, ESMR, as well as providers and manufacturers of wireless data services and products.

[2] *Spectrum Policy Task Force Seeks Public Comment on Issues Related to Commission's Spectrum Policies*, ET Docket No. 02-135, *Public Notice*, (rel. June 6, 2002) (*"Notice"*).

needs in the future. Reform of the spectrum management process, particularly in the allocation context, is an essential step in ensuring that the wireless industry will have a known, predictable path to more spectrum over the next decade and beyond so it can meet the increasing demands of consumers for mobile wireless voice and data services. The current shortfall of commercially available spectrum is already slowing the growth of wireless services, and unless this situation can be remedied, consumers and economic growth will suffer.

## I. INTRODUCTION

CTIA believes that several elements of the Commission's spectrum management process need to be reformed. Current spectrum allocation decisions are political (often driven by the budget process), reactive, and unpredictable. Several adverse consequences result: companies cannot complete advance business planning effectively to meet their customers' needs, new service offerings and technologies are unnecessarily delayed, and the United States is disadvantaged in international spectrum negotiations. All of these factors put a drag on economic growth this country can ill afford in these difficult times for the telecommunications marketplace.

The current spectrum allocation process is not functioning well enough to meet the future growth needs of innovative new services consumers demand, such as those provided by CMRS carriers. The commercial mobile industry will definitely need more spectrum over the next decade, and beyond. The industry needs a predictable path to attain that additional spectrum. The process of trying to find additional harmonized spectrum that could be reallocated for advanced wireless services has highlighted just how difficult it is to envision that "predictable path" under the current U.S. spectrum allocation process. These problems are not confined to the

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[3] Id. at 1.

spectrum management process for the commercial wireless sector. The U.S. Government (USG) allocation and assignment process is a major part of the problem. Any solution must look at spectrum allocations for USG users, not just on the commercial side.

The inherent inefficiency and politicized nature of the process has drawn criticism from all quarters: the Administration, the Hill, the FCC, and industry. The General Accounting Office (GAO), the investigatory arm of Congress, the NTIA, and the FCC are all engaged in serious studies to develop reform proposals. In addition, the Center for Strategic and International Studies (CSIS) has just embarked on a spectrum management analysis to seek new ways the federal government should manage assignment and allocations of spectrum for government and non-government use.

CTIA believes that implementation of the reforms detailed below will facilitate the transition to an improved spectrum management process. While any reform proposals flowing from these efforts will come too late to influence the debate over spectrum for advanced services identified in the NTIA Plan, reform is necessary before the next round of spectrum reallocation begins.

## II. SPECTRUM MANAGEMENT PROCESS REFORMS

The most important overall reform of the spectrum management process should be the initiation of a more systematic longer-term spectrum planning process. The concept of a long-term spectrum plan is missing from the questions posed by the Task Force, yet CTIA submits that this type of process should be a focus of the FCC's and NTIA's reform initiatives. The FCC took a significant step in this direction when it issued its Spectrum Policy Statement in

November 1999,[4] but it has not released a similar document since that time. It is a daunting task to develop a long-term spectrum plan, and it will require significant resources. But the increased predictability that would flow from such a process would immeasurably improve the ability of both the Government and the private sector to implement better spectrum management policies.

The U.S. Government should develop a "rolling" long-term spectrum planning process, possibly modeled on the approach followed by the U.K's Radiocommunications Agency.[5] The goal of such a process would not be to specify how the reallocated spectrum should be used, but rather to identify what spectrum could be made available for uses other than the status quo in the future. Current spectrum allocations would be reviewed to determine which bands should be considered for reallocation for a different use, or could be shared. The designated use of any spectrum identified for reallocation could be decided upon separately, and later.

The U.S. process could potentially involve two separate "rolling" plans: a 3-year and a 10-year plan. The 3-year plan would provide more near-term predictability on the availability of spectrum over the next three years. The 10-year plan would aim for more rational, less political spectrum management decisions over time and review all government and non-government spectrum uses.

The goal of these plans would be to provide more predictability and policy guidance to the allocation process in an effort to get away from the current "reactive" approach. The plans might also help lessen the tie between allocation decisions and the budget process that so often has resulted in inefficient and poorly-timed spectrum decisions. Moreover, longer-term and

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[4] *See* Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millennium*, Policy Statement*, FCC 99-354 (rel. Nov. 22, 1999).

more systematic planning domestically would help the United States to be more successful in the international spectrum planning arena.

Another approach that might help facilitate difficult reallocation decisions would be to create an "independent review" mechanism similar to the Base Realignment and Closure Commission (BRAC) process.[6] This review mechanism could utilize academic and other expert participants to identify Government or commercial spectrum that is being underutilized, or services whose needs could be met in other bands. The result is that the spectrum identified in the review process could then be reallocated or shared for higher and more efficient uses. For example, there may well be fixed uses currently being provided under 3 GHz that could be accommodated higher up in the spectrum, with no loss of functionality. A BRAC-like approach could afford sufficient independence to overcome the inevitable political objections to any reallocation decision. Implementation of the reallocation or sharing opportunities identified by the review could be achieved through the existing USG structure if these opportunities were folded into the long-term spectrum management process.

In addition to the BRAC-like review process, another step that might help facilitate technical analyses of difficult USG/commercial spectrum allocation or sharing decisions would be to provide for technical input from an independent source. These types of decisions could potentially benefit from access to an independent voice, such as an independent consulting firm, or technical advisory committee. CTIA recognizes and commends the Commission for its recent efforts to bolster its engineering staff, but believes that an independent voice would be beneficial

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[5] *See* www.radio.gov.uk/topics/spectrum-strat/future/strat02/spectrum-strategy2002.pdf for the 2002 version of this report.

[6] An overview of the BRAC concept and process is in the *Report of the Base Realignment and Closure Commission*, March 1995, at: http://www.defenselink.mil/news/fact_sheets/brac_rpt.txt.

when the Commission is faced with politically charged USG/commercial spectrum allocation or sharing decisions.

A key procedural reform that should be implemented as a routine part of the Commission's spectrum management process would be for the Commission to require, from this point forward, that a rigorous cost-benefit analysis be completed in conjunction with any allocation decision. The current spectrum management process is not based on an explicit cost-benefit analysis. The FCC is obligated by law to undertake such an analysis that would fully consider the economic benefits and costs (quantitative and qualitative) as part of its spectrum management decisions.[7] Completion of such an analysis will provide the Commission with an insight and understanding of both the technical and financial ramifications of any allocation decision. Implementation of a rigorous cost-benefit analysis prior to allocation decisions, particularly when combined with the other reforms discussed in these comments, may help to avoid repeating the mistakes of allocations that have proven ill-advised, with the test of time.

## III. MARKET-ORIENTED ALLOCATION AND ASSIGNMENT POLICIES

### *A. The Commission's Allocation Policies Are in Need of Major Reform*

The current spectrum allocation process must be reformed if the Commission and NTIA are to be successful in ensuring that there is adequate spectrum to meet the future growth needs of the mobile wireless services that have proven so popular with consumers. The CMRS industry will definitely require additional, harmonized spectrum over the next decade, and beyond. The Commission and NTIA cannot assume that new technologies like Software Defined Radio or Ultrawideband will "solve" the spectrum shortage. Even though new

[7] *See* Letter from Michael Altschul, CTIA, to John Morrall, Office of Information and Regulatory Affairs, Office of Management and Budget, dated May 28, 2002.

technologies offer some promise to help achieve spectrum efficiencies, there is no guarantee that they will be economically viable to deploy, that they will be able to support the services consumers seek, or that they will a match for increasing demand.

The Commission and NTIA should intensify their search for spectrum that is being used inefficiently, to determine if particular bands should be candidates for reallocation. This is especially important for services that are less subject to market-based incentives to use their spectrum efficiently, such as satellite services or USG users, which did not have to pay for their spectrum at auction. A multi-level "rolling" spectrum management plan, such as the 3 and 10-year plans discussed above, perhaps in combination with the BRAC-like process, should help identify such spectrum. The FCC *and* NTIA then have an obligation to reallocate spectrum that is not being efficiently used, whether because the intended service did not materialize, the original assignments were not conducive to providing service, or for any other reason.

CTIA submits that the best approach for the Commission to take when it determines that spectrum is being inefficiently used is to reallocate that spectrum, rather than resorting to the "easy fix" of giving inefficient or commercially non-viable incumbents flexibility to provide any service.[8] This is not to say that CTIA is opposed to flexible service or technical rules in appropriate circumstances. In general, CTIA supports "flexible" allocation and service rules that are established before spectrum is assigned or made available to new uses, when those rights can be factored into auction decisions. Moreover, CMRS licensees have benefited from additional flexibility in technical service rules after licenses have been assigned that facilitated carriers'

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[8] *See* Comments of the Cellular Telecommunications & Internet Association, Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Band, IB Docket No. 01-185 (Oct. 22, 2001) ("CTIA MSS Comments"); Further Technical Comments of the Cellular Telecommunications & Internet Association (March 22, 2002).

ability to choose whatever technology they wished to upgrade their networks, without having to go to the Commission for minor rule waivers. CTIA also supports flexibility in this circumstance, as it enables carriers to deploy the technologies that will best enable them to serve their customers' needs, and fosters innovative, state-of-the-art service offerings.

But the grant of broader additional service rule flexibility to incumbent licensees can also raise many problems, negating the benefits that the regulator might hope to attain. A grant of flexibility to incumbents *after* spectrum has been assigned may result in the offering of services that were never before contemplated under the existing license, resulting in equity, spectrum efficiency, and interference concerns. These concerns can both undermine the value of existing licensees' spectrum assets and interfere with their operations, and perpetuate inefficient allocation and assignment schemes – instead of fixing them. The FCC must be more cautious in granting this type of flexibility.

When presented with a request for flexibility from an incumbent licensee for an entirely different service than the original licensed service, the FCC should first consider whether the request suggests that the spectrum is being underutilized, and should be a candidate for reallocation. As CTIA has noted in a separate proceeding, the 2 GHz MSS proceeding is a good example of this scenario.[9] In that band some of the MSS licensees have claimed their original licensed MSS service would not be viable without adding a new terrestrial service in urban areas, using infrastructure that technically is the same as CMRS service. The Commission should consider such a request for permission to provide an entirely separate service, combined with evidence that the original MSS service is not economically viable, to be a "wake up call" that the spectrum at issue should be a candidate for reallocation.

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There will be circumstances in which the FCC will determine that a band that is not being efficiently utilized cannot be reallocated, for various public interest reasons. If, after full consideration, it is determined that the band is not a candidate for reallocation, the FCC should next determine whether the additional flexible service rights requested could technically be provided by independent companies without interfering with the incumbent licensees. If the additional flexible service rights requested can be provided by independent companies, those rights must be auctioned. It would be contrary to Section 309 of the Communications Act, and unfair to competitors who had paid dearly for their spectrum, to award such "flexible" rights to incumbents for free.

### *B. The Commission's Assignment Policies Are Not in Need of Major Reform*

In general, the process that the Commission utilizes to assign spectrum for commercial wireless services is not in need of major reform. CTIA supports auctions as the best available licensing mechanism. The wireless industry's overall experience with auctions has been positive, when service rules are designed in a way that does not distort the market.[10]

However, one necessary modification of the assignment framework that must be completed as part of any spectrum management reform is the implementation of a trust fund mechanism. The trust fund would be employed when Government spectrum is reallocated and auctioned. Proceeds of the auction would be used to relocate Government users, enabling scarce commercial capital to be devoted to deploying infrastructure, instead of being used to relocate and upgrade incumbents. CTIA recognizes that the Commission currently does not have the

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9 CTIA MSS Comments at 12-15.

10 For example, the fact that installment payments were used in the original C and F block auctions has widely been credited with distorting those auctions, resulting in the economic difficulties that followed.

statutory authority to implement a trust fund, but the Administration is expected to propose such legislation in the near future.

While the Commission's assignment policies in general do not need substantial reform, the satellite licensing mechanism does.[11] The current process ties up valuable spectrum for many years, and often results in an inefficient "mismatch" between the amount of spectrum that the FCC projects would be needed for a particular satellite offering and the actual spectrum requirements once a satellite service is ultimately available. The current 2 GHz Mobile Satellite Service ("MSS") proceeding is illustrative of these problems. Even *before* being licensed, some of these MSS licensees themselves said that MSS is not economically viable in this band, and there is widespread agreement that all eight of the licensees in this band are ultimately unlikely to provide service. This situation is but one example of why the FCC should rethink its satellite licensing process.

In order to address the deficiencies in the Commission's satellite licensing mechanism, the Commission should abandon its current process of accepting satellite applications before spectrum is even allocated to a satellite service or service rules are adopted. Instead, if a new satellite service, with new frequency allocations, is proposed, the Commission should conduct a deliberative but expedited rulemaking process to consider the proposal. An important part of this rulemaking would be to determine if there is truly a need for a new allocation, or whether the proposed service could be accommodated within an existing allocation. If the allocation and service are found to be justified in the rulemaking, the Commission should adopt the technical and other "ground rules" for the service before inviting applications.

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[11] *See generally* Comments of the Cellular Telecommunications & Internet Association, Amendment of the Commission's Space Station Licensing Rules and Policies, IB Docket No. 02-34 (filed June 3, 2002).

The Commission also should work to discourage speculative applications. The goal of the satellite licensing process should be to encourage applicants that have concrete and realistic plans to use the spectrum, instead of speculative filings that seek to "reserve" a spectrum block in the hope that the applicant will be able to obtain financing to develop and deploy a satellite offering at some point in the distant future.

Once licenses are granted, the Commission should ensure that real progress is made towards construction and launch of licensed satellite systems. In circumstances where there is no market-based incentive to use spectrum efficiently, as is the case for satellite companies who do not obtain their spectrum through auction, it is important that the Commission take steps to ensure that spectrum is not left unused or underutilized indefinitely. Construction and service milestones should be much more aggressive than they have been in the past to reflect the increasing urgency of ensuring that spectrum is not lying fallow any longer than necessary, and is redeployed as quickly as possible if the satellite offering is not able to be implemented.

### *C. Spectrum Set Aside for Unlicensed Uses Should Not Interfere With Licensed Uses*

CTIA recognizes that it may be appropriate to set aside additional spectrum for unlicensed uses in the future as demand arises. The Commission, as part of its spectrum management reform effort, should establish as a baseline that any unlicensed use must not interfere with licensed uses. Designation of blocks of spectrum for unlicensed use may help to ensure that unlicensed uses do not interfere with licensed uses. The Commission should also note that, as the 802.11a band has demonstrated, unlicensed uses can and should be effectively deployed in bands above 4 GHz, even for broadband applications.

## IV. INTERFERENCE PROTECTION

As part of its review of the Commission's existing spectrum policies, it is essential that a coherent policy regarding protection from interference be developed, instead of the ad hoc approach to interference rights that has been employed to date. Interference concerns will continue to increase as spectrum bands become more congested. This is true in part because as more uses are deployed, the "noise floor" will increase, creating an adverse effect on licensed services.

There is widespread agreement that the Commission must do a better job of defining the rights of licensed services to be protected from interference. One approach would be to adopt a zoning-like model for determining what is, and is not, acceptable. Under this model, subject to "zoning" service rules that are established for the licensed spectrum, licensees should have the ability to deploy whatever services or technologies they choose. Any service that is requested outside of the band of zoning rights granted to the licensee would have to be presented at a zoning-type hearing where all licensees with an interest could comment.

Going forward, for new spectrum being made available (typically through auction), the FCC should more precisely define the "zoning" rights and obligations of licensees before licensing. For spectrum that has already been licensed, the FCC should ensure that incumbents have the exclusive right to provide service in their licensed spectrum, subject to "zoning" service rules. Those identified rights should not be undermined after licensing.

## V. SPECTRAL EFFICIENCY

As the Commission investigates the concept of efficient use of spectrum, it should recognize that services with market incentives (*i.e.*, auctioned services like CMRS) already have every incentive to maximize spectral efficiency. The majority of CMRS carriers have spent

enormous amounts of capital on both spectrum acquisition and network development. Since CTIA began collecting data in 1985, the United States wireless industry has invested over $105 billion in capital expenditures, including at least $15 billion spent in 2001. With carriers forced to compete in what Chairman Powell has called an industry that is very competitive "by every objective measure,"[12] maximizing return on investment in this competitive environment requires that carriers squeeze every efficiency possible out of their available spectrum, before devoting additional capital to trying to acquire new spectrum – if "new" spectrum is even an option.

Additionally, the fact that most CMRS carriers have been faced with spectrum shortages has forced them to be spectrum efficient. The United States has licensed approximately 190 MHz of commercial wireless spectrum, while Japan, Germany, and the United Kingdom have 300 MHz, 305 MHz, and 364 MHz respectively. As a result, U.S. CMRS licensees have had to achieve dramatic increases in spectrum efficiencies. They have been able to do this because they have been given sufficient flexibility in the technologies and services they are authorized to provide. This type of technical/service flexibility is important to ensure licensees are able to evolve their offerings in innovative ways.

Accordingly, the FCC should not get into the business of dictating efficiency standards for licensees subject to market pressures, such as CMRS licensees. These licensees have market incentives to deploy state-of-the-art technologies, and are better able to analyze and manage their systems and make business decisions on when to upgrade based on that analysis than a regulator ever could.

The real spectral efficiency concerns are with services that are not subject to market discipline. Public Safety users, satellite services, broadcasters, and USG users are not

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12 *See* Communications Daily, Vol. 22, No. 115 (June 14, 2002) at 5 (stated at the

constrained by the same competitive pressures and capital expenditures for spectrum acquisition that face the commercial wireless industry. As a result, spectrum efficiency is not a focus of non-CMRS sectors. The Commission must create incentives for those sectors to utilize their spectrum assignments more efficiently.

## VI. PUBLIC SAFETY COMMUNICATIONS

CTIA believes that providing our nation's first responders with the equipment and resources that are necessary for them to do their job effectively is of paramount importance. This includes providing Public Safety with the ability to communicate effectively and efficiently. It also includes ensuring that any wireless communications equipment that is purchased for first responders should be 21st Century, state-of-the-art equipment that is interoperable, mobile, secure, and spectrum-efficient.

Currently, thirty percent of Public Safety agencies operate systems that have exceeded their typical service life. While seventy-four percent of local agencies report requiring local, day-to-day interoperability, forty-three percent report insufficient interoperability to communicate even on a *local* basis. Only the upgrading of these networks will address this problem. However, sixty-eight percent of Public Safety agencies report funding limitations as the most severe obstacle to interoperability.

CTIA believes that any upgrade of Public Safety networks should not only involve the purchase of state-of-the-art interoperable equipment, but also involve moving most Public Safety operations to the 700 MHz band. The optimal solution to Public Safety's requirements for interference-free and interoperable networks is to redeploy their systems in the 700 MHz band, creating a 21st Century wireless emergency network. This will result in a harmonized block of

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Commission Open Meeting on June 13, 2002).

spectrum that will help to alleviate congestion and interference. CTIA has suggested that a Homeland Emergency Response Operational Enhancement Systems (HEROES) network might be an appropriate name for the creation of a seamless, digital communications system founded on interoperability, mobility, security, and multi-user connectivity. Federal and state public safety agencies could benefit from a harmonized block of spectrum to alleviate congestion and interference, provide interoperability and support advanced services such as mobile data. Interoperability over a common platform would reduce costs of deployment (across all aspects of the service, from base stations, to handsets, to training, etc.) and provide greater efficiencies.

As stated above, the responsibility to use spectrum efficiently extends to all licensees, including Public Safety. Public Safety must deploy upgraded receiver and networking equipment to effectively address interference concerns and operational requirements in the long term. As part of its spectrum management reform, the Commission should notify Public Safety users that they will be expected to deploy upgraded networking and receiver equipment designed to improve intermodulation rejection characteristics and achieve enhanced in-building coverage by a date certain in the future. Such a requirement from the Commission would result in Public Safety entities immediately taking this into consideration when making purchasing decisions.

## VII. INTERNATIONAL ISSUES

Any effort by the Commission to address reform of the spectrum allocation and assignment process in the United States must be accompanied by a concomitant effort to improve U.S. participation in the international spectrum process. Spectrum use within the United States must necessarily be framed in an international context, whether to ensure our use is compatible with our neighbors, or to ensure that our allocations are consistent with international allocations where that is appropriate or necessary. In the CMRS context, it has become increasingly evident

over time that there are significant benefits to be gained from obtaining spectrum that is harmonized with similar uses elsewhere in the world. Harmonization of spectrum allocations enables manufacturers to achieve significant economies of scale for equipment that can result in lower prices for consumers, and can also increase the ease with which services can be offered across borders.

The Commission, along with NTIA and the Department of State, must work to prioritize spectrum issues to be addressed internationally. This will most easily be accomplished by implementing the 3- and 10- year plans discussed above. Those plans could then be used as the basis for a more pro-active U.S. role in shaping *future* World Radio Conference (WRC) agendas by developing an up-front strategy early in the WRC cycle. As part of any strategy, the Commission should advocate shorter, more focused WRCs that address "big picture" policy issues. Technical implementation should be left to working groups.

These changes are more likely to be implemented if the United States appoints a professional WRC Ambassador with expertise in this area. If appointed for a longer term than the current six-month appointment, the U.S. Ambassador would be much better positioned to follow through on United States goals in the international spectrum process. These changes, combined with an effective U.S. domestic decision-making process well in advance of the WRC for controversial spectrum allocation matters, will enable the USG to develop and advocate positions early in the process. The earlier the USG can develop clear, defensible positions, the better the chances of achieving success in the international allocation process.

## VIII. CONCLUSION

For the foregoing reasons, CTIA urges the Commission to adopt the proposed reforms to achieve an improved spectrum management process.

Respectfully submitted,

/s/ *Diane Cornell*

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